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# TOPICAL SCHOOL-ROOM QUESTIONS.

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# TOPICAL SCHOOL-ROOM QUESTIONS

BY

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# INTRODUCTION.

The questions here presented are, for the most part, from actual school-room practice. Such as have been used in everyday class work.

The topical arrangement followed throughout is, at once, the most natural and the most advantageous one.

Every thoughtful teacher recognizes her work to be mainly a skilful practice in the art of questioning.

In the school-room, at least, each question should grow out of the one preceding. Upon this principle the ensuing questions are formulated. It is to be hoped that they may prove flexible enough to admit of such changes as might be required for individual use.

The collection is published in the belief that it will be found of some benefit to the over-worked teacher in a crowded class-room, as a means of saving both time and abor.

THE AUTHOR.

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I

# HINTS.

A bright young teacher was spoken of as an animated question mark. This was indeed a delicate compliment.

In the skilful questioner we recognize the true teacher. It was the method pursued by that most famous of teachers, Socrates, you remember.

Now though we may not all exhibit the genius of a Socrates in our questioning, we cannot fail to secure fairly successful results, if we understand our subject clearly, and stick closely to the text in our interrogative development of the same.

Idle questions naturally produce idle answers. By idle questions we mean such as imply the answers in themselves, that require little or no thought to answer,

and again such as are foreign to the text, being likely to distract the child's attention from the point one desires to make.

Each question should naturally *grow out of* the one preceding,—not follow exactly, but actually spring from it. It is just here that our great leader Socrates displays his inimitable skill. Let us strive to do likewise.

## NUMBER QUESTIONS FOR LITTLE FOLKS.

1. David, Charlie and Jean have blue eyes. Dottie and Kenith have brown; how many eyes all together have they?
2. How many blue eyes are there?
3. How many brown eyes are there?
4. David has closed his eyes; how many eyes are open?
5. The brown eyes are closed; how many eyes are open?
6. The dust blew into Jean's eyes and a bit of coal into one of David's; how many eyes were not hurt?
7. How many blue eyes were hurt?
8. They have each closed one eye; how many are then open?
9. Dottie has fallen asleep, while David and Kenith have run away; how many eyes are left?
10. The girls have closed both their eyes and the boys each one; how many eyes are closed?

## "FUNNY FYSIOLOGY."

1. What is the laundry of the body?
   The lungs.
2. Could you tell how many stationary tubs there are?
   The blood-cells and air-cells are too numerous to count.
3. What is the proper name for the music-box?
   The larynx.
4. The bone-house we live in is called what?
   The skeleton.
5. What are the elastics of the body?
   The muscles.
6. What pump is it that never runs dry?
   The heart.
7. Where is the kitchen?
   The stomach.
8. What is the furnace called?
   The liver.
9. Where is there a drum?
   In the ear.

10. **What act as so many telegraph wires?**
The nerves.
11. **What is the office called that receives all messages along these wires?**
The brain.

## EXERCISE IN CAPITALS.

1. **Write the title of your favorite book.**
2. **Write the title of the last book you have read.**
3. **Write the name of its author.**
4. **Write the names of two children's magazines.**
5. **Write the name of a newspaper published in your town.**
6. **Write the name of the nearest bank.**
7. **Write the names of two churches in town.**

## HISTORY.

### SOUBRIQUETS.

1. **Who was called "Mad Anthony"?**
Anthony Wayne.
2. **Who was known as "Old Silver Leg"?**
Peter Stuyvesant.
3. **"Fighting Jo" was a name applied to whom?**
General Joseph Hooker.
4. **How did "Stonewall" Jackson receive that soubriquet?**
In the Battle of Bull Run his brigade was said to "stand like a stone wall."
5. **What was "old Put's" full name?**
Israel Putnam.
6. **Who was the "Petticoat President"?**
Jefferson Davis.
7. **What was the "Yankee Cheese-box"?**
Ericsson's Monitor.
8. **Who was "old Hickory"?**
Andrew Jackson.

9. **Who were the "Copper-heads"?**

Northerners said to sympathize with the South during the late war.

10. **To whom was the term "Carpet Baggers" applied?**

Northern adventurers who went South at the close of the Civil War to make fortunes and to secure political power.

## OCEAN CURRENTS.

1. **What is meant by an ocean current?**

A stream flowing through the sea.

2. **How are they mainly caused?**

The rotation of the earth causes the heated surface waters of the Tropics to flow off, while the cold, heavier waters of the Polar regions rush in to take their place.

3. **Can you think of another name for an ocean current?**

A sea-river.

4. **How do these sea-rivers compare in volume with rivers on land?**

The volume of water carried is sometimes a thousand times as great.

5. **What important purpose do they serve?**

They moderate the heat of the Torrid regions and lessen the cold of the Polar regions.

6. **Which is the most noted ocean current?**

The Gulf Stream.

7. **Why is it so called?**

It first becomes most noticeable as it issues from the Gulf of Mexico.

8. **Trace its course.**

From the Gulf of Mexico it flows northward, crossing the Atlantic at the British Isles, where it divides, one branch continuing northward along the coast of Norway, until it is lost in the cold Arctic seas. The other, moving southward, follows the coast of Africa.

9. **How does it affect the climate of Western Europe?**

It renders the climate much milder than that of the corresponding latitudes of America.

10. **Where are the famous fog banks?**

Off Newfoundland.

11. **Why are they there?**

They are caused by the meeting of the Gulf Stream with the cold current from the Arctic seas.

12. **What can you tell of the Japan Current?**

It is a part of the Equatorial Current moving northward along the shores of Japan, and, crossing the Pacific in a circular path, it bathes the coast of Northwest America with its warm waters, greatly modifying the climate.

13. **What does Kuro Siwo mean?**

Black water, so called by the Japanese from its dark-colored waters.

## QUESTIONS ON BOOKS.

1. **Who wrote "Water Babies," "Little Lord Fauntleroy," "Little Women"?**

Charles Kingsley, Frances Hodgson Burnett, Louisa Alcott.

2. **Give the names of two American writers for boys.**

"Oliver Optic," Charles C. Coffin.

3. **Name three American women noted in juvenile literature.**

Jane Andrews, Louisa M. Alcott, Susan Coolidge.

4. **Name a character found in a book representing a manly boy.**

5. **One that represents an unselfish girl.**

6. **Name two just the reverse.**

7. **In what book do you read about "Little Nell"; "Uncle Tom"; the man "Friday"?**

Old Curiosity Shop, Uncle Tom's Cabin, Robinson Crusoe.

8. **Use two quality words to describe each of these characters.**

9. **Try to recall the name of another character from each of these books.**

10. **Which is your favorite, and why?**

## COMPOSITION SUBJECTS.

### PICTURE STORIES.

1. Pussy's Warm Coat.
2. Dolly's Wash Day.

3. A Queer Boat.
4. Bossy, My Calf.
5. His First Trousers.

SCIENCE FOR LITTLE FOLKS.

1. Hoot, the Owl.
2. Snap, a Turtle.
3. Story of a Coffee Bean.
4. Fin Folk.
5. Mr. and Mrs. Oriole at Home.

INFORMATION.

1. In a Hop Yard.
2. Beaver Builders.
3. Only a Pin.
4. Pink Skeletons, Coral.
5. The Blood's Round Trip.

IMAGINATION.

1. No Man's Land.
2. A Sunbeam's Travels.
3. Master Fish on Fish Hooks.
4. Croaks of Croak Hollow.
5. A World without Water.

HISTORICAL.

1. In Good Old Colony Days.
2. Winthrop, the Puritan.
3. Old Silver-leg.
4. Vikings in Vinland.
5. The Blue and the Grey.

GEOGRAPHICAL.

1. On the Blue Danube.
2. In a Tea Garden in Canton.

3. A Ramble Through Italy.
4. A New Orleans Cotton Market.
5. Our Neighbor, Canada.

## FOR BOYS.

**Don't**

- enter a private room without knocking.
- forget to rise when ladies leave the room.
- forget to lift your hat on greeting or bidding farewell.
- forget to lift your hat when offering a seat to a stranger.
- forget to lift your hat when acknowledging a favor.
- forget to look directly at the person who addresses you, or to whom you are speaking.

## FOR GIRLS.

**Don't**

- forget that a genuine, kindly feeling is at the root of all true courtesy.
- use slang.
- hurry; continual haste produces bad manners.
- try to attract attention, it is decidedly vulgar.
- be obtrusive in your attentions to other people.
- talk loudly or through your nose. Try to cultivate the "low, sweet voice."

## FOR THE TEACHER.

**Do**

- your pupils hack their desks?
- they use their text-books carefully?
- they prepare *all* written work neatly?
- they speak in distinct tones?
- they fold their arms in the school-room?
- they stoop at the shoulders?
- they always stand on both feet?
- they litter their desks or the floor?

II.

# HINTS.

It sometimes happens that a teacher is so intent on following out the stated daily program, that she does not find time for the "little things" connected with everyday school life.

At the close of school there is litter on the floor and wild confusion in some desks, where one finds a score, perhaps, of ill-treated books. Further examination shows carelessly written exercises on various slates.

The teacher declares she has not time to attend properly to these matters. The course of study is so long that every minute of school time must be devoted exclusively to it.

If the work be long and the time in which to do it

short, it necessarily follows that each moment is of the utmost value, and consequently to be disposed of to the best advantage. Now what can be to the better advantage of a pupil than to train him thoroughly and systematically in ways of neatness, order, and carefulness! All are ready to admit that such habits will be of the greatest importance in his future life. Then, assuredly, it behooves his trainers, his teachers, to develop them most arduously even if one lesson on the daily program must be omitted to do so.

With limited time, quick work is essential, but not hurried work. Rapid work, of necessity, is not slovenly work; any more than slow work is always a proof of painstaking.

## FOR YOUNG AMERICA.

1. **What is our National Hymn?**

America, so considered by most people.

2. **Do you know it "by heart"?**

3. **Describe the United States Coat of Arms.**

An eagle bearing a shield, in whose talons are held a bundle of arrows and a branch of laurel. From the beak is suspended a ribbon bearing the national motto.

4. **What is our national motto?**

E Pluribus Unum, one out of many.

5. **How many stripes in our flag?**

Thirteen.

6. **What does each star represent, and when only may a new star be added?**

A state. On the Fourth of July next succeeding the admission of a new state.

7. **When was the present flag first adopted by Congress?**

June 17, 1777.

8. **Who is said to have first sailed under this flag?**

Paul Jones.

9. **What singular fact is quoted of the Union flag in the late Civil War?**

It is said that no star was ever shot out of a flag at any time during the late war.

10. **Who devised the first flag used by the colonists?**

Benjamin Franklin.

11. **What was its device?**

A snake cut into separate pieces to represent the different colonies and bearing the inscription, "Unite or die."

12. **What was the origin of our present flag?**

Previous to its adoption, the colonists had used a variety of flags. Congress voted, June 17, 1777, "that the flag of the thirteen United States be thirteen stripes, alternate red and white, and the union be thirteen white stars in the blue field."

13. **Can you repeat the stanzas of the Star Spangled Banner?**

14. **Who wrote this famous song and under what circumstances?**

Francis S. Key, an American patriot who was detained on board

the British Fleet as it was bombarding Fort McHenry, the harbor defense of Baltimore in the War of 1812. All day long and far into the night he anxiously watched the banner floating over the fort which the British in vain strove to demolish. The next day he wrote his famous song.

15. **When is a flag said to be at half-mast? Why is it so hoisted at times?**

When it is raised but half way up its pole. It is so hoisted as a token of mourning.

## SOME QUOTATIONS

Every American Boy and Girl should know.

1. "By the rude bridge that arched the flood,
Their flag to April's breeze unfurled,
Here once the embattled farmers stood,
And fired the shot heard round the world."

*Lines on Battle of Concord.* *Ralph Waldo Emerson.*

2. "We hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty and the pursuit of happiness."—*Declaration of Independence.*

3. "The world will little note, nor long remember, what we say here, but it can never forget what they did here, — that we here highly resolve — that government of the people, by the people, for the people, shall not perish from the earth."—*Lincoln's Classic Speech at Gettysburg.*

4. "They are slaves who fear to speak
For the fallen and the weak;
They are slaves who will not choose
Hatred, scoffing, and abuse,
Rather than in silence shrink
From the truth they needs must think;
They are slaves who dare not be
In the right with two or three."

—*James Russell Lowell.*

5. "Our fathers' God! from out whose hand
The centuries fall like grains of sand,
We meet to-day, united, free,

And loyal to our land and Thee,
To thank Thee for the era done,
And trust Thee for the opening one."

*Centennial Hymn.* *John Greenleaf Whittier.*

## REVOLUTIONARY HEROES.

### BRAVE SOLDIERS.

1. The People's Trust, George Washington.
2. A Fine Officer, Nathaniel Greene.
3. The Dashing Ones, Israel Putnam, Ethan Allen, Anthony Wayne.
4. A Brave Sailor, Paul Jones.
5. Fallen Braves, Joseph Warren, Gen. Montgomery.
6. Liberty's True Friend, Marquis de Lafayette.

### HEROIC STATESMEN.

7. The Patriot Lawyer, James Otis.
8. A Fearless Orator, Patrick Henry.
9. Citizen's Leader, Samuel Adams.
10. Liberty's Penman, Thomas Jefferson.
11. Liberty's Chief, John Hancock.
12. Liberty's Purse, Robert Morris.

## KITCHEN ARITHMETIC.

1. **How many tea cups of water to a pint?**
   Two.
2. **About how many tea cups of sugar to a pound?**
   Two.
3. **How many ordinary sized eggs to a pound?**
   Ten.
4. **A quart of sifted flour weighs about how much?**
   One pound.
5. **How much will one ounce of sugar or flour measure?**
   Two tablespoonfuls.
6. **How much will one ounce of butter measure?**
   One tablespoonful.

7. **A pint of liquid weighs about how much?**
   One pound.
8. **How many teaspoonfuls are equal to one tablespoonful?**
   Four.
9. **How many pounds of flour in a bag?**
   Twenty-four and a half.
10. **How many bags to a barrel?**
    Eight.

## PROBLEMATIC STATEMENTS.

SUGGESTIONS:—Have the pupils state their problems before working them. In this way they get the thought of the problem as a whole, with no danger of a solution upon false premises. Again, it saves considerable time. You can have the pupils state their problems under your direction during the Arithmetic hour, leaving the solution for home-work. The form used, you will notice, is that of cancellation, the shortest method.

### MEASUREMENTS.

1. **Our class-room is 16 ft. long, 14 ft. wide, and 20 ft. high. How long will it take the 30 pupils to exhaust the air in the room, each pupil using 28 cu. ft. of air per hour?**

$$\frac{16 \times 14 \times 20}{30 \times 28} = 5\tfrac{1}{3} \text{ hours.}$$

2. **Imagine the room a sort of freight car heaped with grain to the height of 3 feet. How many bushels would it contain?**

$$\frac{16 \times 14 \times 3 \times 1728}{2150.42} = 539.9 + \text{ bushels.}$$

3. **Supposing it were an immense tank half-full of water. How many gals. would it hold?**

$$\frac{16 \times 14 \times 20 \times 1728}{2 \times 231} = 16756.3 + \text{ gallons.}$$

4. **If it were an ice-house, how many tons of ice could be packed in it, allowing $58\frac{1}{8}$ lbs. of ice to a cubic foot?**

$$\frac{16 \times 14 \times 20 \times 465}{8 \times 2000} = 130\tfrac{1}{8} \text{ tons.}$$

5. If it were piled with wood 8 ft. high, how much would the wood be worth at $3.50 per cord?

$$\frac{16 \times 14 \times 8 \times \$7}{128 \times 2} = \$49.$$

6. How many 8-inch tiles would be required for the floor?

$$\frac{16 \times 14 \times 144}{8 \times 8} = 504 \text{ tiles.}$$

7. What would it cost to carpet the floor with Brussels carpeting at $1.50 per yard, if the strips run lengthwise?

$$\frac{(14 \times 4) \times 16 \times \$3}{(3 \times 3) \times 3 \times 2} = \$56.$$

8. *Would it cost more or less if the strips were cut crosswise?

$$\frac{(16 \times 4) \times 14 \times \$3}{(3 \times 3) \times 3 \times 2} = \$56.$$

9. †What would it cost to kalsomine the walls and ceiling at 6 cents per square yard, allowing 10 square yards for doors and windows?

$$\left(\frac{(2 \times (16 + 14) \times 20) + (16 \times 14)}{9} - 10\right) \times \$.06 = \$8.89\tfrac{1}{3}.$$

## MINNIE'S NICKEL.

NUMBER LESSON FOR LITTLE FOLKS.

1. Minnie has a nickel for which Walter gave her 3 pennies; how many more must he give her for it?

2. Minnie buys two apples at a penny apiece, and Walter buys an orange for 3 cents; how many pennies in change does each get?

3. How many pennies have they then together?

4. Minnie finds a five-cent piece, and Walter loses one of his pennies; how much money have they then?

5. How much more has Minnie than Walter?

6. Minnie buys a lead-pencil for 2 cents, a sponge for a penny, and spends the rest of her money for a slate; how much does the slate cost?

* Find even number of strips first.

† Product of distance around room and height equals area of imaginary rectangle constructed of four walls.

7. Walter now receives 3 cents for running an errand. On his way back he tries to buy a pint of peanuts with his money, but is told he needs one penny more; how much were the peanuts a pint?

8. How many more pennies had Minnie spent than Walter really?

## ANIMAL WORKERS.

FOR LITTLE FOLKS.

1. What animal is a great spinner?
   The spider.
2. Which one can make paper?
   The wasp.
3. Which one is an excellent mason?
   The beaver.
4. What animal can sew well?
   The tailor-bird.
5. Which one can saw logs as well as a carpenter?
   The beaver.
6. Which one is a clever fisherman?
   The fishing-hawk.
7. Which one weaves a silken cradle?
   The silk-worm.
8. What one is a good wax-maker?
   The bee.
9. Which one is a famous digger?
   The mole.
10. What animal drills holes finely?
    The woodpecker.
11. Which is the noisy chatter-box?
    The parrot.
12. Which one is a swift messenger?
    The carrier-dove.
13. Which one is a thorough street-cleaner?
    The jackal.
14. What animal is a wonderful wood-carrier?
    The elephant.

## LANGUAGE.

### DESCRIPTIVE WORDS.

1. Name two things that are:

| | |
|---|---|
| porous | gaseous |
| elastic | natural |
| transparent | artificial |
| opaque | oval |
| fragrant | circular |
| solid | square |
| liquid | triangular. |

2. Write as many quality words as you can to describe a good-natured boy.

3. Write as many quality words as you can to describe a true lady.

## CHILDREN'S COLLECTIONS.

### IN YOUR NEIGHBORHOOD.

1. **How many common wild flowers, growing in your neighborhood, can you name?**
2. **How many kinds of birds have you noticed?**
3. **What minerals are most common near by?**
4. **What varieties of trees do you find?**
5. **Which is the oddest bird's nest you have seen near home?**
6. **What cocoons have you gathered?**
7. **Have you many varieties of beetles in your neighborhood?**
8. **Don't you like to make collections?**
9. **Do you find out all you can about each object collected?**
10. **Do you label them carefully?**
11. **Do you mount your specimens so as to preserve them?**

## EUROPE.

1. **What is the area of Europe?**
   Nearly four million square miles.
2. **What is its population?**
   More than 300 millions of people.

3. **How does the population compare with that of our country?**
   More than 5 times as large.
4. **How does it compare in size?**
   About the same.
5. **What is its greatest length?**
   Some 2500 miles.
6. **What is its greatest width?**
   Nearly 3500 miles.
7. **Which grand division has the most irregular coast-line?**
   Europe.
8. **Which is the smallest grand division?**
   Europe.
9. **Which has the greatest length of coast-line in proportion to area?**
   Europe.
10. **Of what natural advantage is this irregular coast-line?**
    It affords numerous good harbors.
11. **Which grand division contains more important commercial ports perhaps than all the others put together?**
    Europe.

III.

# HINTS.

In our class-room discussions do we always bear in mind the fact that the child's knowledge of a subject is naturally crude, incomplete, or inexact?

Do our questions supplement his imperfect statements, so that he feels he has added his share, however small, to the stock of information gathered; or do we rather interrupt him in his first error with a quick "you do not understand," or perhaps another question showing him his mistake, at the same time creating a feeling of mortification, which for the moment is apt to destroy any intellectual benefit he might receive?

Is it not manifestly better to allow the child to make his answer in peace? Then take it for what it is actually worth, accepting the true and quietly ignoring the false.

The reply of an attentive listener can seldom be wholly wrong, provided the question be clearly, reasonably, and suitably put.

When in the progress of a lesson we demand comparatively exact or exhaustive statements, we soon find our answers confined to the bright pupils. The bright pupils have their places to fill, their clever replies abetting our instruction, while aiding or stimulating the dull ones to a certain extent; nevertheless the weak ones are our especial care, and, as every teacher comprehends more or less, require the most skilful handling, in that they may be encouraged and strengthened, rather than disheartened or mortified.

Again a halt statement from a poor student is often produced at the expense of deeper thought than the more brilliant answer of his clever classmate. By the way, is not this really our ideal recitation? To get the best thought possible, under the circumstances, from each pupil by himself, of himself, for himself, in comfort and in peace.

## THANKSGIVING.

**1. What sort of government did the God-fearing Pilgrims and Puritans seek to establish?**

A Theocracy.

**2. Who issued the first thanksgiving proclamation?**

Gov. Bradford of the Plymouth colony in the autumn of 1621.

**3. How was it celebrated?**

By a feast of thanksgiving and praise at which all were expected to attend if possible.

**4. Who came unbidden to the feast?**

A party of curious Indians who remained encamped near by for several days or more and seemed anxious for friendly intercourse.

**5. Had the settlers reaped a bountiful harvest?**

"God be praised," wrote one of them, "we had a good increase of corn, and our barley is indifferent good, but our peas are not worth the gathering."

**6. What kind of game did these good people find in the forests which afforded them a plentiful feast?**

Wild turkeys and deer.

**7. Was this idea of setting apart a day of thanksgiving a new one?**

From the earliest times it had been a custom among various nations.

**8. What ancient Jewish festival corresponded closely with the Pilgrim's Thanksgiving?**

The Feast of the Tabernacles.

**9. What Roman holiday was somewhat similar?**

The ancient Saturnalia.

**10. What English merry-making took place at the close of harvest?**

The Harvest-Home.

**11. How was the second festival celebrated?**

In the summer of 1623 there was a severe drought which threatened total destruction to all crops. A day of fasting and prayer was followed by welcome rain reviving the crops, at the ingathering of which a day of public thanksgiving was gratefully observed.

**12. How did the custom gradually spread?**

At first the observance was confined to the Puritans. Long

afterwards Washington recommended its observance to Congress. President Lincoln, too, issued a proclamation for a public thanksgiving during the Civil War. Of late years it has become an annual and national custom, a proclamation being issued by the president as well as by the different governors.

## PHYSIOLOGY.

### A LIVE PUMP.

1. **What organ of your body acts like a pump?**
   The heart.
2. **What can you say of its structure?**
   It is a hollow muscle.
3. **Of what shape is it?**
   Cone shaped.
4. **About how large is it?**
   About as large as my fist.
5. **Where does it lie?**
   If I place my chin down upon my chest as far as possible I mark the spot over which my heart hangs with its sharp end downward toward my left side.
6. **What is the sharp end called?**
   The apex.
7. **How is the heart built inside?**
   It is a sort of double house formed by a wall of muscle runn.n lengthwise. This wall contains no op.ning.
8. **What can you say of these two divisions?**
   One is much larger than the other.
9. **How is each one of these parts divided?**
   Into an upper aud lower floor by a tiny ceiling of muscles.
10. **What does this muscular ceiling contain?**
    A little folding door that opens and shuts of itself.
11. **In what is the heart encased?**
    A slippery coat to preserve it from injury that might be caused by its action.

**12. How is this heart pump connected with other organs of the body?**

By two large drain-pipes called "veins" and two larger supply pipes called "arteries."

**13. Where do these two drain-pipes connect with the heart?**

At the upper right hand story.

**14. What is the work of these two large drain-pipes?**

They drain the blood from all parts of the body into the heart.

**15. What takes place here?**

As soon as this story is filled with blood its walls press together, forcing the blood into the lower story. The folding doors between are closed by the pressure of the blood in the lower story, the walls of which in their turn contract, thus forcing the blood elsewhere.

**16. Where is the blood pumped from the lower right hand story?**

It is sent into one of the larger pipes or arteries which connects the heart and the lungs.

**17. What can you say of this artery?**

When it reaches the lungs it divides itself into many tiny bags or cells.

**18. With what then are these tiny cells filled?**

With blood from the heart.

**19. With what else are the lungs filled?**

With a countless number of air cells that act as so many "stationary washtubs."

**20. Then what is to be done with this blood from the heart?**

It is to be washed, for it entered the heart by the sewer pipes, the veins.

**21. How are these different cells arranged?**

These tiny blood-cells and air-cells lie close about each other with nothing but the finest skin between.

**22. What strange power has the air in the air-cells?**

It can go right through the fine skin walls into the blood-cells.

**23. What does it do that for?**

The air mixes with the blood to take from it something that makes the blood thick and dark or unclean.

**24. What soon becomes of this bad portion of the blood?**

It is breathed out with the air from the lungs.

25. **What do the lungs do with the blood which is now bright and clean?**

They send it back home to the other side of the heart.

26. **Where does it enter?**

At the upper left story.

27. **What about this story?**

It has a folding door that works the same as its neighbor.

28. **How does the blood get out of the lower story?**

There is a very large arched pipe that opens into it.

29. **What happens at every heart beat?**

Some blood is pumped into the pipe.

30. **What can you say of this artery?**

It divides itself like a tree into many, many branch-pipes.

31. **Of what good is this?**

These branch-pipes carry the pure blood to every part of the body to nourish it.

32. **How is this done?**

These branch-pipes become finally so tiny as to be called capillaries or hair-like pipes.

33. **What about their size?**

If you pierce the tip of your finger with the finest needle point, you injure one of these capillaries.

34. **Where may they be found?**

Every organ of the body is supplied with them.

35. **What change in the blood takes place here?**

Each organ takes what it needs from the blood for nourishment and yields its worn-out particles or waste matter.

36. **What becomes of this waste matter?**

The blood containing it is carried into the veins which spring from the capillaries. These veins, becoming larger and fewer, soon merge into the two large ones connected with the upper right story of the heart.

37. **How long does it take a drop of blood to make its round trip?**

About eight minutes.

38. **About how much blood is there in the body?**

About one-eighth of our bulk.

39. What is the common expression used in speaking of the blood's round trip?

The circulation of the blood.

## PERCENTAGE DRILL.

$125 cost, 25 per cent. gain, Gain?
" " " " " , Selling Price?
" " " " loss, Loss?
" " " " " , Selling Price?

$125 selling price, 25 per cent. gain, Gain?
" " " " " , Cost?
" " " " loss, Loss?
" " " " " , Cost?

$125 gain, 25 per cent. gain, Cost?
" " " " " , Selling Price?
" loss, " " loss, Cost?
" " " " " , Selling Price?

## MEASUREMENTS.

### DRILL IN LENGTHS.

1. How tall are you?
2. How tall is the baby?
3. How tall is your father?
4. How many inches around your slate?
5. How high are your desks?
6. How wide are the blackboards?
7. How long is the window-pole?
8. How high are the doors?
9. What is the length of the class-room?
10. What is its width; its height?
11. What is the distance from the school-house to your home?
12. What is the length and width of the city lots?
13. What is the width of your street?
14. What is the length of the block n which you reside?
15. Mention some place about a mile from school.

## GLACIERS.

1. **What becomes of the snow that falls on high mountain tops where it is too cold to melt quickly away?**

It accumulates in the passes between the high mountain peaks.

2. **How is it that the snow mass on the mountain top remains about the same year after year?**

The surplus amount of snow, changed into ice, is slowly but surely carried down the high mountain valleys.

3. **The snow lying between the mountain sides gradually turns into ice, how?**

The snow becomes changed into ice by pressure.

4. **Such a river of snow and ice is called by what name?**

These snow-rivers are known as glaciers.

5. **What is the meaning of the term?**

The word glacier is derived from the Latin term "glacies," ice.

6. **It has been proven that a glacier moves, though slowly. Give the reasons.**

Pressure from the snow masses above and the force of gravity cause a glacier to move.

7. **What is a moraine?**

A line of earth and rocks along either margin of the glacier is called a moraine.

8. **How are boulders shaped?**

Boulders are rocks rounded by the action of glaciers.

9. **In the economy of nature, what purpose do glaciers serve?**

They feed mountain streams which are the sources, oftentimes, of large rivers.

10. **What country contains the best-known glaciers?**

Switzerland.

11. **What American scientist is recognized as a standard authority on the subject of glaciers?**

Louis Agassiz.

12. **Where did he largely pursue his study of the subject?**

In Switzerland, a country of which he was a native.

**13. What is said of Greenland with respect to glaciers?**

Its surface is commonly supposed to be nearly covered by an immense glacier stretching from the north.

**14. What important rivers have their rise in glaciers?**

The Rhine, and the Rhone, and the Ganges.

**15. How are icebergs caused?**

In the Arctic regions, the glaciers of Greenland extend down to the sea, and the part in the water gradually breaks off and floats out to sea as an iceberg or ice mountain.

IV.

# HINTS.

There is a careless habit prevalent among many pupils. It is that of making their answers in detached words or phrases, rather than in the form of sentences. This custom is partly due, without doubt, to the spirit of haste which seems to pervade our class-rooms as well as our business places; laying us open to the charge, and with good reason, too, of an easy superficiality.

However that may be, the majority of thinking teachers to-day readily acknowledge language to be *the* study, *par excellence*, of any class-room, whether it be college lecture-room or lisping kindergarten.

Of course every teacher has a language lesson each day. The prescribed course of study requires it; but does this lesson last the day through? Is it a part and

parcel of each recitation, the living flesh and blood; or is it the dry bones, to be brushed over carelessly, in the hurried play of figures sometimes called Arithmetic, or that "rapid-transit" journey commonly known as Geography?

It seems a little thing to require a pupil to make his answer in the form of a statement; yet the meagre result, after a faithful, continuous trial, has astonished and mortified many a teacher.

The careless habit is too deeply rooted to be eradicated in a few months, it is found. That is very true, but it is also true that the vocabulary of the pupil is at fault. It is too limited to allow him the luxury of an ample statement.

Induce the pupil to enlarge that vocabulary by every means within your power, in season and out of season. Then in the meantime help him along in his attempts at sentence building, by putting your questions in the form of smooth, yet simple, statements, leaving a blank to be filled out by the pupil, who makes his reply by repeating —that is, using your model—to aid him in constructing a good English sentence with which he may be, as yet, not sufficiently familiar to handle alone with any degree of skill.

One of the prominent English educators, himself a

teacher of language, stated not long since that, in his opinion, we needed more conversation in our class-rooms with less of writing perhaps.

Let us bear in mind a conversation in the school-room is a talk *with* our pupils, not exactly *to* them.

## HISTORY.

### VIKINGS IN VINLAND.

1. **Who were the "Vikings"?**

Bold sea-rovers who had their homes in the viks or bays of the rocky coast of Scandinavia.

2. **Where was "Vinland" said to be?**

On the upper Atlantic coast of America; some believe as far south as Rhode Island; at least, it was far enough south for the vine to grow.

3. **By what name are these "Vikings" known in American history?**

Northmen.

4. **Where may an account of their voyages and settlement in America be found?**

In early Icelandic chronicles.

5. **How did the New World become known to the "Vikings"?**

Exiles from Norway had founded a settlement in Iceland; from whence a few had roved to Greenland. Some of the latter, it is said, wandered further westward and found a mild land where the vine grew.

6. **Who was the leader of this colony?**

Leif, son of Erik.

7. **What became of the colony?**

It is said to have lasted for three years, but all traces of it were so completely lost that many have doubted its existence.

8. **What noted American poem relates to this colony of the Northmen?**

Longfellow's Skeleton in Armor.

9. **What can you state of the settlement at Greenland?**

It was destroyed utterly by a plague in the fourteenth century

10. **What conjecture is made concerning Columbus in relation to "Vinland"?**

It is thought he may have heard of "Vinland" while in Iceland on one of his voyages.

11. **Where has a monument been erected to Leif Erikson?**

In Boston.

## RIVERS.

1. **What force carries a river to the sea?**
   The force of gravity.
2. **By what force are its waters returned to the land again?**
   By evaporation.
3. **What feed rivers besides springs?**
   Snow fields or glaciers.
4. **How do rivers alter the face of the earth?**
   By their power of wearing away even the hardest of rock and the enormous deposits laid down by them.
5. **How is a delta formed?**
   At the mouth of a river, where the current is checked by the inflowing sea-tide, its sediment is deposited in a fan-shaped heap known as a delta.
6. **Name two rivers noted for their heavy deposits at their mouth.**
   The Mississippi and the Nile.
7. **Why has the Amazon no deltas?**
   At the mouth of the Amazon, which is very wide, there is a strong ocean current that washes away the deposit as fast as it is made.
8. **What are "levees"?**
   Embankments along a river to protect the adjoining land from an overflow.
9. **What can you state of the deltas of the Mississippi?**
   The enormous amount of sediment deposited annually at the mouth of the Mississippi is enough to build a monolith 268 feet high, with a base of one square mile.
10. **What work was done by Captain Eads?**
    At the mouth of the Mississippi he constructed jetties, a sort of piers, to divert the course of the river into a narrow, deeper channel, carrying the sediment farther out to sea, and thus preventing the mouth of the river from being choked up with silt.

## QUESTIONS ON MINERALS.

1. **How do you test the hardness of a mineral?**
   By its ability to scratch another.

2. **What is a common test for quartz?**
   Its ability to scratch glass.
3. **What can you state of the hardness of quartz?**
   It is one of the very hardest of minerals.
4. **How is glass made?**
   Quartz sand is fused with soda or potash.
5. **How may quartz, which is so hard, be melted?**
   It will not melt of itself when subjected to heat, though it fuses quite readily when mixed with soda or potash.
6. **What is the natural shape of salt crystals?**
   Cubes.
7. **What is the common name for transparent quartz crystals?**
   Rock crystals.
8. **How have quartz crystals been formed?**
   Hot springs holding soda or potash in solution dissolved the hard quartz rock which, as the water disappeared, solidified in regular geometric form known as crystals.
9. **What is their usual shape?**
   Six-sided prism, ending in a six-sided pyramid.
10. **What name is given to purple quartz crystal?**
    Amethyst.
11. **What is "agate"?**
    Agate is quartz, in which the color is arranged in thin bands or layers of different color, as white, smoky-brown, or red.

## SEARCH QUESTIONS.

WHO WROTE

1. **Robinson Crusoe?**
   Daniel Defoe.
2. **Little Women?**
   Louisa M. Alcott.
3. **Little Lord Fauntleroy?**
   Frances Hodgson Burnett.
4. **Boys of "'76"?**
   Charles C. Coffin.

5. **Story of a Bad Boy?**
   Thomas B. Aldrich.
6. **Wild Life Under the Equator?**
   Paul du Chaillu.
7. **Tom Brown's School Days?**
   Thomas Hughes.
8. **Uncle Tom's Cabin?**
   Harriet Beecher Stowe.
9. **Little Nell?**
   Charles Dickens.
10. **The Ugly Duckling?**
    Hans Christian Andersen.
11. **Rip Van Winkle?**
    Washington Irving.
12. **Child's Dream of a Star?**
    Charles Dickens.
13. **Life and Her Children?**
    Arabella Buckley.
14. **Child's History of England?**
    Charles Dickens.
15. **Young Folks' History of the United States?**
    Thomas Wentworth Higginson.
16. **Tanglewood Tales?**
    Nathaniel Hawthorne.

## CHILDREN'S POEMS.

FIND OUT THE AUTHOR OF

1. **The Children's Hour.**
   Henry W. Longfellow.
2. **The Barefoot Boy.**
   James Greenleaf Whittier.
3. **Seven Times One.**
   Jean Ingelow.
4. **The Mountain and the Squirrel.**
   Ralph Waldo Emerson.

5. **Paul Revere's Midnight Ride.**
   Henry Wadsworth Longfellow.
6. **The May Queen.**
   Alfred Tennyson.
7. **In School-Days.**
   James Greenleaf Whittier.
8. **The One Hoss Shay.**
   Oliver Wendell Holmes.
9. **Baby Belle.**
   Thomas Bailey Aldrich.
10. **Robert of Lincoln.**
    William Cullen Bryant.
11. **John Gilpin.**
    William Cowper.
12. **We Are Seven.**
    William Wordsworth.
13. **The Old Oaken Bucket.**
    Samuel Woodworth.
14. **Home, Sweet Home**
    John Howard Payne.
15. **Woodman, Spare That Tree.**
    George P. Morris
16. **My Mother's Bible.**
    George P. Morris.

## EXERCISE IN CAPITALS.

### FAMOUS AMERICANS.

1. **Write the names of two generals.**
   Ulysses S. Grant, Robert E. Lee.
2. **Write the names of two inventors.**
   Thomas Alva Edison, Samuel B. Morse.
3. **Write the names of two poets.**
   William Cullen Bryant, Henry Wadsworth Longfellow.
4. **Write the names of two prose writers.**
   George Bancroft, Washington Irving.

5. **Write the names of two travellers.**
   Bayard Taylor, Henry M. Stanley.
6. **Write the names of two statesmen.**
   Daniel Webster, Henry Clay.
7. **Write the names of two business men.**
   Peter Cooper, John Jacob Astor.
8. **Write the names of two scientists.**
   Matthew F. Maury, James D. Dana.
9. **Write the names of two preachers.**
   Henry Ward Beecher, Theodore Parker.
10. **Write the names of two professors.**
    W. W. Goodwin, Francis Wayland.
11. **Write the names of two editors.**
    Horace Greely, Charles A. Dana.

## DICTATION EXERCISES.

### COURTESY.

" How sweet the charm of courtesy !
And gracious words how sweet !
No virtue of the soul can be
Without this grace complete.
Its fragrant breath befits the rose.
Such pleasure from politeness flows."

—*John Van Cleve.*

1. " Politeness is the outward garment of good-will."—*Proverb.*
2. " Manners and learning make a gentleman."—*Proverb.*
3. "We must be gentle now we are gentlemen."—*Shakespeare.*
4. " There is nothing costs less than civility."—*Cervantes.*
5. "A good deed is never lost; he who sows courtesy reaps friendship ; and he who plants kindness gathers love."—*Basil.*
6. " Bad manners are a species of bad morals."—*C. N. Bovée.*
7. " A man's own good breeding is the best security against other people's ill manners."—*Lord Chesterfield.*
8. " Politeness is to goodness what words are to thought."—*Joseph Joubert.*

9. "It is a part of good breeding, that a man should be polite, even to himself."—*Jean Paul Richter.*

10. "Kind words are the music of the world."—*F. W. Faber.*

11. "A beautiful form is better than a beautiful face; a beautiful behavior is better than a beautiful form. It is the finest of the fine arts."—*Ralph Waldo Emerson.*

12. "Life is not so short but there is time enough for courtesy."—*Ralph Waldo Emerson.*

13. "A gentleman makes no noise; a lady is serene."—*Ralph Waldo Emerson.*

14. "Look up, and not down; look forward, and not back; look out, and not in; and lend a hand."—*Edward E. Hale.*

TRUTH.

1. "Falsehoods not only disagree with truths, but usually quarrel among themselves."—*Daniel Webster.*

2. "Truth is the property of no individual, but is the treasure of all men."—*Ralph Waldo Emerson.*

3. "There is nothing so strong or safe, in any emergency of life, as the simple truth."—*Charles Dickens.*

4. "I have been young, and am now old, and have not yet known an untruthful man to come to a good end."—*Berthold Auerbach.*

5. "Oil and truth will get uppermost at last."—*Proverb.*

6. "Reputation is what men and women think of us; character is what God and angels know of us."—*Thomas Paine.*

7. "Truth crushed to earth shall rise again."—*William Cullen Bryant.*

8. "The credit that is got by a lie only lasts till the truth is out."—*Proverb.*

## SIMPLE GRAMMAR.

COMPLEMENTS

(a.) Verbs express { action. / being. / state of being.

First class contains majority of verbs.

Second class, the verb "*to be*" in its various forms.

Third class, but few, *live*, *die*, *sleep*, *lie*, *appear*, *seem* and equivalents.

(b.) Some verbs complete in themselves.

(c.) Others, incomplete, requiring word or words to complete meaning.

(d.) Words used to complete, called comple(te)*ment.

(e.) Complement can always be found by asking question *what* after the verb.

(f.) Verbs expressing action followed by *object* complement.

(g.) Verbs expressing being or state of being, by *attribute* complement.

(h.) Object complement, noun or pronoun.

(i.) Attribute complement, noun, pronoun or adjective.

## MENTAL ARITHMETIC.

### ALIQUOT PARTS OF A DOLLAR.

Find cost of

1. 64 yds. of lace @ 87 1-2 c. per yd.
   $56.
2. 32 lbs. of raisins @ 12 1-2 c. per lb.
   $4.
3. 56 bu. of oats @ 37 1-2 c. per bu.
   $21.
4. 72 lbs. of tea @ 62 1-2 c. per lb.
   $45.
5. 90 yds. of goods @ 66 2-3 c. per yd.
   $60.
6. 100 yds. of scrim @ 33 1-3 c. per yd.
   $33$\frac{1}{3}$.
7. 36 lbs. of crackers @ 16 2-3 c. per lb.
   $6.

* Show derivation. Children are apt to confuse with the well-known word "compliment."

8. 48 lbs. of barley @ 8 1-3 c. per lb.
   $4.
9. 100 yds. of sateen @ 50 c. per yd.
   $50.
10. 80 yds. of surah @ 75c. per yd.
   $60.

## MEMORY DRILL.

1. No. lbs. to a short ton.
   2000 lbs.
2. No. lbs. to a bbl. of flour.
   196 lbs.
3. No. lbs. in a bag of flour.
   24[1] lbs.
4. No. bags in a bbl.
   8 bags.
5. No. gals. in a bbl.
   31½ gals.
6. No. lbs. to a bbl. of fish.
   200 lbs.
7. No. lbs. to a bu. of wheat.
   60 lbs.
8. No. lbs. to a bu. of corn.
   56 lbs.
9. No. lbs. in a long ton.
   2240 lbs.
10. No. lbs. to keg of nails.
   100 lbs.

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1. Weight of a cu. ft. of water.
   62½ lbs.
2. Weight of a cu. ft. of marble.
   165 lbs.
3. Weight of a pt. of water.
   1 lb.

4. **No. pts. in a bu.**
   64 pts.
5. **No. gi. in a gal.**
   32 gi.
6. **No. qts. in a bu.**
   32 qts.

V.

# HINTS.

To the pupil, does each word stand for a clear mental picture, an idea?

Do the figures on that neatly filled slate represent certain conditions or relations of a certain number of actual things?

How the pupils do fail just here! Not the little ones, they study number, in a most natural way, by means of objects.

Now when the pupils drop their physical grasp of objects in their number study, we naturally infer that their mental grasp should be kept firm. But is it really so? Our pupils, as they advance class by class, become more or less skilled in the manipulation of figures with which number,

a collection of real things, has frequently little or no connection in their minds.

There is no clear mental picture, of which the figures are mere symbols. To many most unconsciously the figure is all in all. In other words, we neglect to develop that most important faculty, the picture-making force, the imagination, the natural basis of all sound number work; and then complain, when the combinations of figures are not correctly made, that the pupils don't think.

What we need right here is to cultivate, to quicken to strengthen the imagination. How shall we do this?

Would it not prove a feasible plan to take some minutes from that long Arithmetic recitation—it is usually the longest—and devote such time to a lively course in juvenile imaginative literature?

Say, for instance, Esop's Fables, Andersen's Fairy Tales, Alice in Wonderland.—The dullest mind, the most sluggish imagination will respond, to a certain extent at least, to the mighty touch of Robinson Crusoe or Swiss Family Robinson.

## AFRICAN EXPLORATIONS.

1. **What famous explorer has lately returned from Africa?**

Henry M. Stanley.

2. **For what purpose was Stanley sent to Africa?**

For the relief of Emin Pasha.

3. **By whom was he sent?**

The Emin Relief Committee, whose headquarters were in London.

4. **Who is Emin Pasha?**

A noted German linguist who for years has been in the employ of the Turkish or Egyptian government.

5. **What position did he hold in Africa?**

He was appointed by the Khedive governor of an equatorial province in Africa.

6. **In what danger was he supposed to be?**

His province lay open to the attacks of hostile, barbarous tribes on various sides. Far from the reach of civilized aid, it was not possible for him to sustain his position much longer, especially as he was short of ammunition.

7. **What nefarious traffic in the interior of Africa has long been carried on by the Arabs?**

The slave traffic.

8. **For what purpose?**

To supply the Turkish slave markets.

9. **Who is Tippu Tib?**

An Arab governor in Central Africa.

10. **What dreadful work is sometimes done by these slave raiders?**

Entire villages are depopulated.

11. **Who have promised to use their power against this practice?**

The various European powers holding possessions in Africa.

12. **What countries are actively interested in African exploration?**

Portugal, England, Germany and Belgium principally.

13. **What can you state of King Leopold's connection with African enterprise?**

He is president of the International Association of the Congo, and most actively interested in the affairs of the Congo State.

14. **What two nations have lately settled an agreement as to colonial possessions in Eastern Africa?**

England and Germany.

15. **Name some important commercial products of interior Africa.**

Ivory, gums, palm-oil and rubber.

16. **Where are the Stanley Falls?**

On the upper Congo.

17. **What work already started will actually open up Africa to the business world?**

The Congo railroad.

18. **What is the subject of Stanley's new book?**

In Darkest Africa.

19. **What description does he give of African forests?**

"Imagine the whole of France and the Iberian peninsula closely packed with trees varying from 20 to 180 feet high, whose crowns of foliage interlace and prevent any view of sky and sun, and each tree from a few inches to four feet in diameter."

## DICTATION EXERCISES.

### HISTORICAL UTTERANCES.

1. "I am not worth purchasing, but such as I am, the king of Great Britain is not rich enough to buy me."—*General Joseph Reed.*

2. "I was born an American; I live an American; I shall die an American."—*Daniel Webster.*

3. "I only regret that I have but one life to lose for my country."—*Nathan Hale.*

4. "I know not what course others may take; but as for me, give me liberty, or give me death!"—*Patrick Henry.*

5. "Sir, I would rather be right, than be President."—*Henry Clay.*

6. "We will live in love with William Penn and his children as long as the sun and mo n shall endure."—*Penn's Indian Treaty.*

7. "He snatched the lightening from the sky, and the sceptre from tyrants."—*Turgot.*

8. "Millions for defence, not a cent for tribute."—*Charles C. Pinckney.*

9. "We have met the enemy and they are ours."—*Commodore Perry.*

10. "Don't give up the ship."—*Captain Lawrence.*

11. "I propose to fight it out on this line, if it takes all summer."—*U. S. Grant.*

12. "With malice towards none, with charity for all, with firmness in the right, as God gives us to see the right."—*Abraham Lincoln.*

13. "Proclaim liberty throughout the land to all the inhabitants thereof."—*Inscription on Liberty Bell.*

14. "We must all hang together, or else we shall all hang separately."—*Benjamin Franklin.*

15. "These united colonies are, and of right ought to be, free and independent states."—*Declaration of Independence.*

16. "This meeting can do nothing more to save the country."—*Samuel Adams.*

17. "The contest may be severe; the end will be glorious."—*Joseph Warren.*

## WINDS.

1. **What becomes of the light heated air of the tropics?**
   As an upper current it moves off to cooler regions.
2. **Where does the heavy cold air of the polar regions travel?**
   It rushes in as a return current to fill up the space left by the rising heated air.
3. **Supposing the general circulation of air ceased; how would this affect the hot regions—the cold regions?**
   The heat of the Torrid regions would be increased so as to become insufferable, while the cold of the Polar regions could not be endured.
4. **Why are constant winds called "trade winds"?**
   Because they are of advantage to the navigator and to trade.
5. **Which absorbs the sun's rays more readily, the land or the sea?**
   The land.
6. **Which retains the heat longer, land or water?**
   Water.

7. How is it, at the seashore, you sometimes find the water quite warm on a cool day?

It has not as yet radiated its latent heat.

8. What causes a cool sea-breeze on a hot day?

The earth radiating its heat more freely than the water causes the air above it to become heated. This heated air, becoming lighter, rises and floats off, while the heavier, cooler air from the sea rushes in below to take its place as a sea-breeze.

9. How is the cool land-breeze at night caused?

At night the earth having radiated its heat becomes cold, and consequently the air over it is chilled. The air over the sea, owing to the slower radiation of heat from the water, has finally become heated, and rises, as the cooler, heavier air from the land rushes out to sea as a land-breeze.

## SENTENCES.

1. Write a statement about Christmas.
2. Write a question about New Year's Day.
3. Write a command made by your teacher
4. Write a sentence expressing wonder.
5. Write one containing an exclamation of sorrow.
6. Write another containing an expression of mirth.
7. Write a sentence that is a polite request.
8. Write a sentence that is an exclamation.
9. Write a sentence that expresses a wish.
10. Answer the following questions in statements:
11. What is a sentence called that simply states or declares?
12. What is a sentence called that asks a question?
13. What is a sentence called that expresses a command or wish?

## A LEAF.

1. What is the broad part of a leaf called?

The blade.

2. What are those tiny leaf spurs often found at the end of its stalk called?

Stipules.

3. **What name is given to those lines running through the leaf?**
   The veins.
4. **With what does the leaf-blade prove to be filled?**
   With innumerable pores.
5. **With what organ of our bodies may the leaf-blade be compared?**
   With the lungs.
6. **What work is done by leaves?**
   They pick the air to pieces.
7. **Of what is this air largely made up?**
   Of oxygen and carbon.
8. **What do the leaves do with this compound?**
   They separate the oxygen from the carbon, rejecting the former and retaining the latter for food.
9. **When only is this work done?**
   In the sunshine.
10. **What great work then is done by leaves?**
    They purify the air for animals.

## EXERCISE IN COMPOSITION.

1. Write a note of thanks for a favor received.

2. Write a short note of sympathy to your class-mate, who is absent from school on account of an attack of "the grip."

3. Write a note of invitation to a cousin to join your Botany Club in a ramble for wild flowers.

4. Write a polite note to the town librarian, requesting him to send you, by bearer, a copy of "Little Lord Fauntleroy."

5. Write his answer stating the book is not, at the time, in the library, and giving the title of the volume he sends as a substitute.

6. Write a courteous note to your teacher regretting your intended absence for the day, giving reasons.

7. Write a letter of acceptance to a "stone-hunt" from your chum, who is a member of the Mineralogy Class.

8. Send your regrets in a telegram of ten words.

## EVERY BOY SHOULD THINK

When to say "no."
When to be generous.
When to acknowledge an error.
Always to be just.
Always to be courteous.
Always to be manly.

VI.

# HINTS.

There is an experience common to all teachers; not confined to the superficial ones at all, but embracing the more thorough-going as well.

It exhibits a phase that will not down, and is especially irrepressible at that period of the school term when a large number of the members of graded schools are immersed in the nerve-harrowing depths of a semi-annual examination.

A subject carefully taught is found to be lost or forgotten as we say; not only by the dull or careless pupils, but oh! most humiliating to admit, by the clever and studious ones also.

This is our common bitter experience.

If the aim of our teaching be result, in the form, per-

haps, of a number of correctly written answers to set questions; then, perforce, we are inconsolable through a lack of such answers.

By the way, how many of the subjects presented as lessons are remembered by the pupils, even for a short time, after leaving school?

True, there has been more or less of unconscious assimilation, else there were no teaching, but these so-called lessons, as such, have largely passed from the mind.

If, by teaching, we understand the quickening of the faculties that exist in the child-mind, and the directing into proper channels of the activities thus aroused, and do not look upon the child-mind as an empty mental pitcher to be filled by an inpouring of miscellaneous facts; then it behooves us to be particularly careful as to *how* we attempt to quicken and to guide, rather than to concern ourselves so much as to the *amount* of mental material gathered by the child in a specified length of time.

In other words, let us be sure of our *method*, and let the result, so delusive, so unsatisfying, take care of itself.

## SLAVERY IN THE COLONIES.

1. **What nations enslaved the natives of America?**

Mainly the Spaniards and the Portuguese, for the purpose of working the mines and plantations.

2. **What part did Columbus take in this work?**

He sent five hundred Indians to Spain as slaves in 1494.

3. **What was the result of the enslavement of the Indians?**

The Indian slaves, subjected to cruel treatment, and unaccustomed to confining labor, rapidly dwindled away.

4. **What can you state of the Indian tribes with whom Columbus and his immediate followers met for the most part?**

They were by no means so fierce and warlike as the Indians farther north or in the interior.

5. **What was done to supply the place of the Indian slaves?**

Negroes were brought from Africa.

6. **Who were the earliest colonial slave-importers?**

The Portuguese, who obtained large numbers from their West African possessions.

7. **What was soon discovered with regard to the Negroes?**

They proved to be hardier than the Indians, far more docile, and their labor rapidly became profitable.

8. **What was the first place in America to receive African slaves?**

Hayti, which was also the first place in which they became free.

9. **In what way?**

In the year 1791, the Negroes of Hayti arose in successful rebellion against their masters, thus abolishing slavery.

10. **Who was the first Englishman to import slaves into the colonies?**

Sir John Hawkins.

11. **How is slavery said to have started in the English colonies?**

A Dutch sea captain, who had kidnapped twenty Negroes from Africa, offered them for sale to the Virginia planters in 1619.

12. **With what result?**

Slave labor proved very profitable. In 1776 there had been 300,000 Africans brought into the English colonies.

13. **Where did slavery become firmly established as a social institution?**
Among the Southern planters.

14. **What invention materially aided to perpetuate slavery in the South?**
The invention of the cotton gin.

15. **Who are said to have drawn up the first remonstrance to slavery in the colonies?**
German settlers in Pennsylvania in 1688.

16. **What two colonies were not allowed to hold slaves?**
The colonists in New Sweden, and Oglethorpe's colony in Georgia; the latter, however, soon clamored for the privilege, and their leader was compelled to yield to their demand.

## THE VOICE-BOX.

1. **What name is given to the voice-box?**
It is called the larynx.

2. **Where is it located?**
At the upper end of the trachea or air-pipe.

3. **What is the front part of it when prominent called?**
It is sometimes called Adam's apple.

4 **Of what is this oblong box made up?**
It consists of pieces of cartilage which move upon each other.

5. **What does the box hold?**
Strings of muscle called vocal cords.

6. **What name is given to the slit in the box?**
Its name is glottis, from glotta, tongue.

7. **What can you state of the box cover?**
It is a spoon-shaped lid called epiglottis.

8. **When is this lid shut down?**
We close it in the act of swallowing.

9. **For what reason?**
So that the food may not slip into the air-pipe, but pass onward to the food-pipe, which is a little to the left and behind the air-pipe.

10. **How do the vocal cords lie?**
They lie loose and apart across the opening, so as to allow air to pass into and out of the lungs.

11. **What happens when we talk?**

When we talk, the muscles attached to the larynx draw the vocal cords parallel and close together.

12. **What then?**

Then the passing of air along the parallel edges of the strings, making them vibrate, causes sound just as on the violin.

13. **How is this sound formed into words?**

By means of the roof of the mouth or sounding board, the teeth, lips, tongue, jaws and cheeks.

14. **How many letters are there in our language?**

There are twenty-six.

15. **About how many sounds do we use to represent these letters?**

We use about forty sounds.

16. **What can you say of the positions of the vocal organs while speaking?**

The changes are innumerable and almost too rapid to take note of.

17. **Do we have to think to do this work?**

No, we do it unconsciously.

18. **What then is a most wonderful power we possess?**

The power to form sound into words or to talk.

19. **If the vocal cords are paralyzed or in any way injured, what follows?**

Speech is hindered if not absolutely prevented.

20. **What is "smoker's sore throat"?**

A disease of the larynx said to be brought on by excessive use of tobacco.

21. **How else may the larynx be injured?**

By talking too much at a time, especially in the open air.

22. **What happens when one has a cold?**

In such a case the air-passages are more or less inflamed. The vocal cords are also affected, so care should be taken not to irritate or strain them by continuous talking.

23. **How may voice be strengthened and improved?**

By exercise for short periods of time.

24. **What length of time do vocal teachers recommend for practice?**

Often not more than five minutes at a time, at the most from fifteen to twenty minutes.

25. **What important fact to be remembered in the development of voice?**

To breathe deep unobstructed breaths from the bottom of our lungs, not from the top only.

26. **What criticism is frequently made against the voices of American women?**

They are pitched too high and the sound is sent out through the nose.

## CIVICS.

1. **What is a colony?**

A community of people in a new land still subject to the control of the parent state.

2. **What is a state?**

A community of people that governs itself.

3. **What is a difference between a monarchy and a republic?**

In a monarchy the sovereign rules for life; in a republic the ruler is chosen for a specified length of time.

4. **State another difference.**

In a monarchy the rule generally descends from father to son, but in a republic the ruler is elected by popular vote.

5. **What is meant by the Constitution of the United States?**

The body of written laws by which our country is governed.

6. **When and where was it framed?**

At Philadelphia in the year 1787.

7. **What can you state of the working of the constitution?**

It has successfully stood the test of a century. Framed to govern a new-born nation of a few millions, it is to-day the accepted form of government of a powerful nation of sixty millions of people.

8. **How is the government of the United States divided?**

Into three departments, the legislative, the executive, and the judicial.

9. **What is the meaning of the term legislative?**

Law-making, from the Latin (lex, legis) law, and the verb (ferre, latum) to bear or carry.

10. **Analyze the word executive.**

It comes from the Latin (ex) out of, and the verb (sequi. secutus) to follow—hence, law-enforcing.

11. **What is the derivation of judicial?**

From the Latin adjective (judicialis) derived from (judex) judge or (jus) law—hence, law-interpreting.

12. **What is the motto of the United States?**

E pluribus unum ; one out of many.

13. **Is the nation then made up of more than forty republics?**

No, it is a governmental unit.

14. **Upon what principle are the laws of each state formed?**

No state law may conflict with federal law.

15. **What does the word "federal" mean?**

It comes from the Latin, fœdus, league.

16. **What are federal states?**

States so united that individual sovereignty is subordinate to that of the union thus formed.

VII.

# HINTS.

A spirit of mutual friendliness between teacher and pupil is not so common in the class-room as one would naturally suppose.

No thoughtful teacher will, for a moment, doubt the efficacy of friendliness in aiding to solve the troublesome question of class discipline.

A pupil is supposed to believe that his teacher is one of his best friends; but boys and girls are not given to abstract reasoning.

In after years, with matured judgment, they may be led to see that "faithful are the wounds of a friend;" as yet, however, their juvenile minds are fully occupied with the smart or the pain, giving little thought for its cause or result.

Now, while it is undoubtedly the office of the teacher to admonish soberly, to reprimand severely, to judge relentlessly, to punish unflinchingly, can she not, without loss of dignity or authority, prove to the pupils that the class-room is not a camp of two opposing factions, but that it is a harmonious educational union, invested with mutual rights, hence mutual obligations?

When even an unreasonable boy perceives for himself that his teacher believes thoroughly in fair play, both "in fun and in fair," he will eventually acquiesce to her judgment, though it be against himself.

A little friendly conversation outside of school and school books, a merry jest, a hearty laugh, these are the little things that help to build up the children's regard for and faith in their teacher; then when that faith is once secured, where may not the teacher lead the eager, plastic, loyal, little adherents?

## NUMBER LESSON.

### DAVID'S CHICKENS.

1. David owns two hens; one has six chicks, the other has four; how many chicks have both hens?

2. How many has the one hen more than the other?

3. Bruno killed two chicks and the rats carried off two more; how many were left?

4. Then one died and two strayed away and were lost; how many chicks now remained?

5. David's grandpa gave him five more; how large was the brood then?

6. Two fell into the brook and one was run over by a wagon. David counted his chicks once more and found how many?

7. How many had he lost altogether?

8. In the barn David found a new brood of seven hatched. "Now," said he, "I have eleven!" What number should he have said?

9. How many less had he in the beginning?

10. How many had he owned altogether?

## THE STATUE OF LIBERTY.

1. **What large statue lies near the entrance of New York harbor?**
   The Statue of Liberty.

2. **Is it owned by the State of New York?**
   No, it belongs to the United States.

3. **Where was it built?**
   In France.

4. **How came it into the possession of the United States?**
   It was presented by the people of France to the American people.

5. **How much did this great work cost?**
   It is said to have cost $250,000. This sum was mostly contributed by French working people at the rate of a dollar apiece.

6. **Who was the sculptor?**
   A Frenchman named Bartholdi.

7. **Of what is the statue constructed?**
   Of copper-sheets one-eighth of an inch thick, fastened to a four-sided iron frame, which runs up through the centre of the figure.

**8. Of what does the statue consist?**

Of a gigantic female figure, with uplifted arm, holding a torch and resting upon a great pedestal.

**9. What does this statue represent?**

Liberty enlightening the world.

**10. Of what is it a token?**

It is a token of esteem and respect from one republic of liberty-loving people to another, whose earliest friend it had been.

**11. What is the height of the statue?**

Including pedestal and foundation, 305 feet.

**12. What is its weight?**

It weighs about 220 tons.

**13. What is said of its size?**

It is the largest statue known.

**14. Can you give any idea of its size?**

The forefinger is eight feet long, while the nose is three feet seven inches in length.

**15. How may one ascend the statue?**

By a staircase on the inside, running from the foot of the statue up to the torch, where one can go outside to a railed balcony.

**16. What is said of the view here displayed?**

The view, embracing New York harbor and city, the great bridge, the noble Hudson, with its innumerable river craft, the incoming or outgoing ocean steamships, the blue gray Palisades in the distance, the fine bay widening into the sea—all combine to form one of the grandest views in America.

## DICTATION EXERCISES.

### GOOD NATURE.

1. Good nature will always supply the absence of beauty, but beauty cannot supply the absence of good nature.—*Addison.*

2. Could we forbear dispute, and practise love,
We should agree as angels do above.

—*Edmund Waller.*

3. Care to our coffin adds a nail, no doubt,
And every grin, so merry, draws one out.

—*John Wolcott.*

4. Kindness is the golden chain by which society is bound together. —*Goethe.*

5. He that cannot forgive others breaks the bridge over which he must pass himself; for every man has need to be forgiven.—*Edward Herbert.*

6. Joy, temperance and repose,
Slam the door on the doctor's nose.

—*Longfellow.*

7. Sow good services; sweet remembrances will grow from them.— *Mme. de Stael.*

8. Next to the virtue, the *fun* in this world is what we can least spare.—*Agnes Strickland.*

9. A good laugh is sunshine in a house.—*Thackeray.*

10. Write your name in kindness, love, and mercy on the hearts of thousands you come in contact with, year by year, and you will never be forgotten.—*Thos. Chalmers.*

11. The merriest folks are the best, I know,
For those who are laughing and gay
Are the ones who are willing to stop and show
Tired people an easier way.

12. One of the grandest things in having rights is, that, being your rights, you may give them up.—*MacDonald.*

## INDUSTRIES OF THE STATES.

FIRST RANK IN

| | |
|---|---|
| Wheat, | Dakota |
| Silver, | Colorado |
| Tobacco, | Kentucky |
| Sugar, Molasses, | Louisiana |
| Ship-building, | Maine |

| | |
|---|---|
| Slate and Granite Quarrying, | Maine |
| Grapes, Barley, Sheep, | California |
| Gold and Silver, | California |
| Oats, Meat-packing, | Illinois |
| Corn, Hogs, | Iowa |
| Cotton, Woollen, Worsted Goods, | Massachusetts |
| Cod and Mackerel, | Massachusetts |
| Copper, Lumber, Salt, | Michigan |
| Marl, Zinc, Silk Goods, | New Jersey |
| Value of manufactures, | New York |
| Printing and Publishing, | New York |
| Hops, Hay, Potatoes, | New York |
| Tar and Turpentine, | North Carolina |
| Farm Tools and Wool, | Ohio |
| Iron and Steel, | Pennsylvania |
| Petroleum and Coal, | Pennsylvania |
| Phosphates, | South Carolina |
| Cattle and Cotton, | Texas |
| Peanuts, | Virginia |

## THE ATMOSPHERE.

1. **What is the meaning of the term atmosphere?**
   Vapor-sphere, from atmos, vapor.
2. **What is the atmosphere?**
   The great air-ocean about us.
3. **About how far out into space does it extend?**
   From thirty to forty miles of ordinary density. A much rarer atmosphere is supposed to extend far beyond.
4. **With what may the atmosphere be compared?**
   A thick veil.
5. **How does it act like a veil?**
   It screens us from the too fierce rays of the sun.
6. **What else does it do for us?**
   It retains both light and heat which otherwise would be lost in space.

**7. If it were not for the atmosphere, what would happen directly after sunset?**

Darkness would immediately fall.

**8. How is twilight caused?**

It is caused by the power of light to hold itself back in the atmosphere after the sun has set.

**9. We should have wintry cold each night if it were not for what?**

The power of the atmosphere to retain largely the heat radiated by the earth after sunset.

**10. Is the sky really blue?**

No, heavenly space is utter darkness. It is only by looking through the vapor veil filled with light, the atmosphere, that space appears blue.

VIII.

# HINTS.

Light makes things clear to the eye, but it gives no heat; so teaching may make things plain to the mental eye, yet incite the mind to little or no activity.

In the latter case the pupil will often display clear knowledge of the subjects as taught, but no more. He is not particularly interested in this subject, nor that one, nor yet another. All are the same to him as they seem to his teacher. He has received no stimulus to further thought.

How much greater the profit, where the teacher so excites the interest of the naturally curious child that he sets to work to find out something more for himself.

No Columbus prouder than he as he returns, with eager confidence, to relate the story of his discoveries!

Yes, enthusiam will carry a teacher over many a dark place and, like charity, cover a multitude of sins.

We cannot live by light alone, its complement heat we must have, or we die Is it not equally true, that the light of teaching falls sterile often because it be not accompanied by the fruitful heat—enthusiasm?

## OUR TOWN.

1. How was your town named?
2. Can you bound it?
3. Name the chief business street.
4. Name the first street.
5. Is there a court-house in your city?
6. How do most of the streets run?
7. How many public schools are there?
8. How is the town governed?
9. How is the drinking water procured?
10. How is the town lighted?
11. What is meant by "public grounds"?
12. Mention a paper published in your town.
13. Is there a bank?
14. Name some public building and tell the purpose for which it is used.
15. Have you a free library?
16. How was your town settled?
17. How old is it?
18. What is the oldest church; the oldest school?
19. What spot is noted in its history?
20. What stories of "olden times" have you heard from one of the oldest inhabitants?

## COLUMBUS, THE BRAVE.

1435–1506.

1. Upon what fact did Columbus base his famous undertaking?

That the world was a globe; therefore by sailing west he would reach the east.

2. Was this fact commonly believed?

No, although it had been taught from ancient times by the sages, the theory had never been practically proven.

3. In what subjects was Columbus especially skilled?

In the subjects, geography and navigation. At times he gained a livelihood by making maps.

4. How is it said that his great idea dawned upon him?

In constructing his own maps he was compelled to compare various maps, then in existence, from which he drew many fruitful conclusions.

**5. What erroneous notions did he have with regard to the earth, which he believed to his death?**

He believed the earth to be much smaller than it really is, and that Asia was much larger in proportion. He reckoned to find Asia just about where he found the outskirts of America.

**6. For how many years did he strive to get means to pursue his proposed journey?**

For about twenty years.

**7. How long out of this time was he kept waiting in Spain before he received the necessary aid?**

Some seven years.

**8. Under what condition did he finally sail?**

He was to bear one-eighth of the expenses and receive one-eighth part of the profits.

**9. What titles was he to receive?**

He was to receive the title of Don, the office of admiral, also viceroy and governor of all the land he might discover.

**10. How was he, a moneyless man, enabled to bear his share of the expense in fitting out the fleet?**

Through the assistance of the Pinzons, merchants and navigators at Palos. By their aid he added a third vessel furnished by them.

**11. When did Columbus start on his perilous enterprise?**

On Friday, August 3, 1492.

**12. What strange circumstances frightened the sailors?**

They feared that the Trade winds encountered would prevent their return. Then they were startled by the dip of the needle in the compass.

**13. What fact made use of by early Portuguese navigators did Columbus now recall?**

They had often followed the flight of birds when in search of land.

**14. What evidences of land finally appeared?**

A live crab, floating on a patch of seaweed, was picked up, also a branch of thorn, with fresh berries upon it. Land birds, too, were seen, and fish never found far from shore.

**15. How was land first sighted?**

Late at night, on the 11th of October, Columbus himself saw a

light in the distance. Early the next morning a gun from the Pinta, the vessel on ahead, sounded the signal of land.

**16. What land was it?**

An island of the Bahamas, known by the natives as Guanahane, but named by Columbus San Salvador.

**17. What islands did he next discover?**

He coasted along Cuba and stopped at Hayti, where he built a fort and called the place Hispaniola.

**18. What became of this fort and its inmates?**

The men left here by Columbus on his return to Spain quarrelled among themselves, strayed off from the fort and treated the natives so badly that the strangers were all killed.

**19. What had been a great object of Columbus in his four voyages?**

To find the rich gold lands of the East.

**20. Did he realize his expectations?**

No, little gold was to be found near the coast. The gold lands, found later on, lay in the interior.

**21. What can you state of the misfortunes of Columbus?**

His enemies succeeded in having him deposed from his office of governor and sent home to Spain in irons.

**22. What famous remark did he make concerning these chains?**

"I will preserve them as relics and memorials of the rewards of my services." He requested that they be buried with him.

**23. How did he die?**

He died neglected and poor, at the age of about seventy, in a little old town in Spain, Valladolid, having petitioned the King in vain to clear his honor and restore his dignities.

**24. What sort of a man was Columbus?**

He was most daring, energetic, generous-minded. A shrewd observer, a just ruler of men, a man of vivid imagination and devoutly pious.

## GEMS.

1. **What is a gem?**
2. **What is the color of**
3. **An emerald?**
4. **An amethyst?**
5. **A topaz?**

6. **A turquoise ?**
7. **A sapphire ?**
8. **A garnet ?**
9. **A diamond ?**
10. **What is a pearl ?**

A white, hard, smooth, lustrous substance, found in a species of oysters.

11. **What is mother-of-pearl ?**

The hard brilliant lining of several kinds of shells.

## THE CORAL POLYP.

1. **What is an insect ?**

An animal whose body is cut into three distinct parts.

2. **What is the correct name given to the coral animal ?**

It is named coral polyp, from polyp, which means many footed.

3. **What work is done by these feet or tentacles ?**

They are used by the animal to fan the sea water towards its mouth.

4. **What does the polyp take from the sea-water ?**

Lime with which to build up its skeleton.

5. **What peculiar fact is known of its home in the sea ?**

It cannot live below certain depths any more than it can at the surface.

6. **How then are coral reefs formed ?**

The animals start their work on the deep ledges of rock that arise from the ocean's bed.

7. **What is an atoll ?**

A circular shaped narrow island of coral formation, enclosing a sort of lake.

8. **What is the name given to this lake which is open at some part ?**

It is called a lagoon.

9. **Where does the red coral of commerce come from ?**

The Mediterranean.

10. **What are the so-called "coral groves" ?**

Coral formations of various colors seen in the clear depths of a lagoon, which, with their numerous branching arms, appear as so many gorgeously colored trees of a grove.

IX.

# HINTS.

"A little child shall lead them." How often these words are called to mind in the class-room when the wise teacher follows the natural workings of the child mind as she guides into pastures new!

Under such circumstances the method used is most assuredly a natural one and exceedingly simple as well.

One hears so much of "method" now-a-days! Here is one easy to apply, requiring nothing more than wise patience, and sympathetic insight into childish mind to understand.

It sometimes happens that a teacher, in sheer despair, allows a lesson to drift on, when, to her utmost surprise, she suddenly perceives the subject, a moment since

deemed hopelessly confusing to the pupils, in some strange manner, to be disentangling itself.

What has happened? Simply this, the children have taken hold of the subject in their own child-like way, unhampered by outside or rather artificial pressure.

A teacher leads best as she follows the unconscious play of nature in the child, here restraining, perhaps, there encouraging, yet all the while following the sure childish instinct.

So the sensible teacher comes to teach, and often remains to learn, from the very pupils themselves, how to teach. Especially is this true of the little ones who enter the school-room, kings of nature with unhampered instincts. Sometimes we call these children "stupid" when we simply fail to comprehend the true state of affairs, and are actually preventing the children from freely using those faculties which have served them so royally for the first five or six years of their lives.

## FUNNY "FYSIOLOGY."

1. **What house is built of bone?**
   Our body.
2. **Where is the kitchen?**
   In the stomach.
3. **What are the stairs down to it called?**
   The food-pipe or œsophagus.
4. **Where is the furnace?**
   In the liver.
5. **Where is the music-box?**
   At the top of the air-pipe.
6. **What do we call its ordinary music?**
   Talking.
7. **Is the box open?**
   Not always. It has a spoon-shaped lid that shuts down sometimes.
8. **When is the lid shut down?**
   While swallowing.
9. **What trunk do you always carry about with you?**
   Trunk of my body.
10. **What machine, always running, does the trunk hold?**
    The breathing machine, the lungs.
11. **What spring floor underneath this machine?**
    A floor that rises or falls with each breath, called the diaphragm.
12. **What hammer in the trunk beats continually?**
    The heart.
13. **Where is the telegraph office?**
    In the head.
14. **From what spot are the dispatches sent?**
    From the brain.
15. **How are the dispatches sent?**
    By means of the wires, the nerves, to all parts of the body.
16. **What is the name of the great telegraphic dispatcher?**
    The mind.
17. **What are the windows of the telegraph office called?**
    The eyes.

18. **What is the common name for the two shell-like doors?**
The ears.
19. **Of what use are these doors and windows?**
They bring in the news from the outside world.
20. **What is the night-watchman at the office called?**
Sleep.

## AMERICAN WONDERS.

1. **Greatest wonder of the world.**
Niagara Falls.
2. **Greatest cave.**
Mammoth Cave, Kentucky.
3. **Largest lake.**
Lake Superior.
4. **Greatest natural bridge.**
Natural Bridge, Virginia.
5. **Greatest suspension bridge.**
Brooklyn Bridge.
6. **Greatest iron mass.**
Iron Mountain, Missouri.
7. **Greatest monument.**
Washington Monument.
8. **Greatest statue.**
Bartholdi Statue, Bedloe's Island.
9. **Greatest aqueduct.**
Croton Aqueduct, New York.
10. **Greatest anthracite coal mines.**
Pennsylvania.

## BLUE LAWS OF CONNECTICUT.

1. **What is the origin of the title "blue laws"?**
It was a name applied to laws written in a "blue book," so called from its blue cover.
2. **Which early American colonies were noted for their blue laws?**
Massachusetts and Connecticut.

3. **In which colony were these laws enforced the more stringently and practised the longer?**

In Connecticut.

4. **What law was made against unbelievers?**

No food or lodging could be given to a Quaker, Adamite, or other heretic.

5. **What laws existed for the proper observance of the Sabbath?**

No one could run on the Sabbath day, or walk in his garden, or elsewhere, excepting reverently to and from meeting. No one should travel, cook victuals, make beds, sweep house, cut hair or shave on the Sabbath day.

No woman should kiss her child on the Sabbath or fast day.

6. **What time was included in the Sabbath?**

From sundown Saturday evening until sundown on Sunday.

7. **What laws existed against the observance of Christmas day?**

No one could read the book of Common Prayer, keep Christmas, or Saints' days.

8. **How were pleasures regarded?**

No one could make minced pies, dance, play cards, or play on any musical instrument except the drum, trumpet, and jews-harp.

9. **Who only could perform the marriage ceremony?**

Magistrates, as they might do it with less scandal to Christ's Church.

10. **Are any of the so-called "blue laws" in existence to-day?**

In many of the States they remain on the statute books, forgotten and long since fallen into disuse.

11. **What curious instance can you give of a sudden revival of one such law?**

In New Jersey, not long since, a man who had publicly blasphemed Christ and the Christian religion, in a manner very offensive to the Christian community in which he resided, was tried for blasphemy and duly convicted of the crime, as there existed an old law on the statute books against the crime of blasphemy.

## PRELIMINARY DRILL.

### PERCENTAGE.

1. 6 out of every 12 is the same as how many out of every hundred?
2. 2 out of every 12 is the same as how many out of every hundred?
3. 4 out of every 12 is the same as how many out of every hundred?
4. 8 out of every 12 is the same as how many out of every hundred?
5. 10 out of every 12 is the same as how many out of every hundred?
6. 6 out of every twelve oranges were spoiled; what part was spoiled?
7. How many hundredths is that?
8. John saved 3 cents out of every 5 cents he earned; what part did he save?
9. How many hundredths is that?
10. $\frac{3}{4}$ of a number is the same as how many hundredths of it?

## HISTORICAL POEMS.

1. Skeleton in Armor.—*Longfellow.*
2. Landing of the Pilgrims.—*F. C. Hemans.*
3. The King's Missive.—*Whittier.*
4. The Exiles.—*Whittier.*
5. Paul Revere's Ride.—*Longfellow.*
6. Song of Marion's Men.—*Bryant.*
7. Lines on the Battle of Concord.—*Emerson.*
8. Old Ironsides.—*Holmes.*
9. Star Spangled Banner.—*F. S. Key.*
10. The Angels of Buena Vista.—*Whittier.*
11. Battle Hymn of the Republic.—*Julia Ward Howe.*
12. John Brown.—*E. C. Stedman.*
13. Barbara Fritchie.—*Whittier.*
14. John Burns of Gettysburg.—*Brete Harte.*
15. Sheridan's Ride.—*T. B. Read.*
16. The Union.—*G. P. Morris.*
17. The Blue and the Gray.—*F. M. Finch.*
18. Ichabod.—*Whittier.*
19. Biglow Papers.—*Lowell.*
20. Battle of the Kegs.—*F. Hopkinson.*

## HISTORICAL TREES.

1. Treaty Elm.—At Philadelphia where Penn made his famous treaty with the Indians. The spot now marked by stone monument.

2. Washington Elm.—At Cambridge. Still standing to mark the spot where Washington took command of the Continental army.

3. Liberty Elm.—Stood on Boston Common till within a few years. Dedicated to the cause of liberty. A rallying spot for the patriotic citizens during the Revolutionary war.

4. Burgoyne Elm.—At Albany. Planted on the day that Burgoyne was brought into Albany, a prisoner on the day after the surrender.

5. Charter Oak.—At Hartford. Said to have held hidden within its hollow trunk the precious Charter of Connecticut.

6. Tulip Tree.—At King's Mountain, South Carolina, where ten tories were hanged at one time.

7. Black Walnut Tree.—Near Haverstraw, where General Wayne gathered his forces preparatory to his midnight attack on Stony Point.

8. Pine Tree.—At Fort Edward, New York, under which Jane McCrea was murdered.

9. Ash Trees.—At Mount Vernon. Planted by Washington.

10. Pear Tree.—Planted by Peter Stuyvesant, Dutch Governor of New York more than two hundred years ago.

X.

# HINTS.

It is not a common thing for children to form an adequate conception of the relations sustained by previous lessons to the one under consideration.

Each lesson is a link, we say; but we know full well that these links do not forge themselves into a firm, unbroken chain. For this reason we go over the work once more, strengthening the weak spots, clinching the loose bars, clearing up the dull parts, so that even the slow or less thoughtful pupils may get some conception of the strong, beautiful chain of thought that has been woven, piece by piece, in the class-room daily.

Properly conducted, such a looking backward cannot fail to strengthen the mental powers; to train the mind in habits of careful attention.

If comparison and contrast be ignored, judgment not called into play, prominent features lost sight of in a confusing mass of detail, then this important work degenerates into a gigantic mechanical task of memorizing, as profitless as it is wearisome.

A clear topical review is of inestimable advantage to a pupil; just as a hurried cram for "examination" is time worse than wasted. It is a wrong done to each individual pupil.

## LANGUAGE.

### DRILL ON VERB TO LIE.

1. Your hat —— under the tree.
2. No, mine is —— on that bench.
3. Kitty's —— there too an hour ago.
4. They have —— there often.
5. Do not —— in the hot sun.
6. Puss —— perfectly still for a long time.
7. She had —— so for an hour, when Johnny suddenly disturbed her.
8. "She has —— there long enough," said he.
9. Rover was —— near by.
10. As he too jumped up, Johnny cried, "—— down, sir!"

### DRILL ON VERB TO LAY.

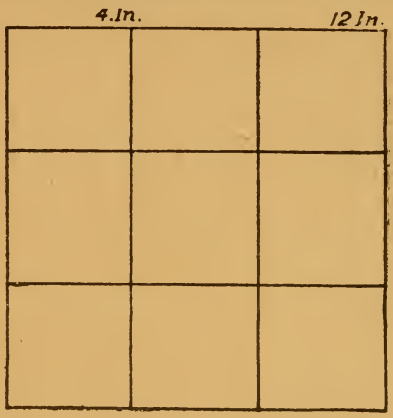
1. —— the book upon the desk.
2. I —— it there some time ago.
3. Have you —— your hat away?
4. Yes, I —— it in my hat-box.
5. Will you —— aside your wraps?
6. Henry had —— away his work before leaving.
7. He —— himself upon his bed.
8. "Now I —— me down to sleep."
9. Are you —— that carpet lengthwise?
10. I have —— no plans for the future.

### A COMBINATION.

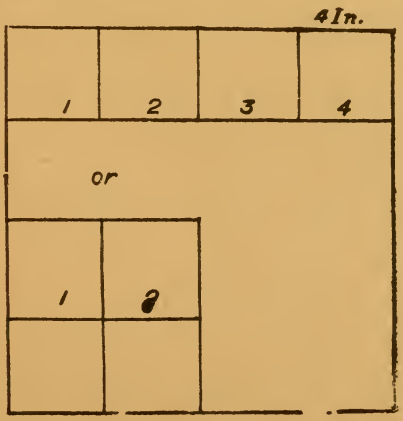
1. —— aside your work and —— down to rest.
2. —— on the sofa, and I will —— this shawl over you.
3. —— your tools beside those that —— yonder.
4. They —— all care away, and —— down to peaceful slumber.
5. I had —— asleep an hour when you entered to —— the carpet.

## DIAGRAMS IN ARITHMETIC.

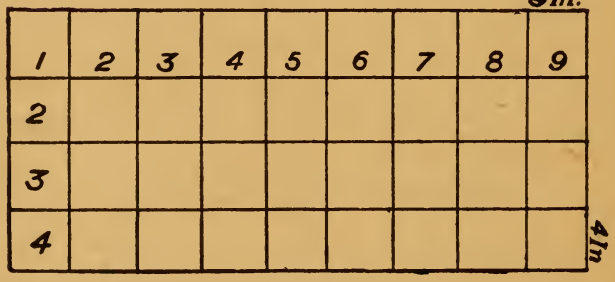
1. Into how many 4-inch squares can you fold a square foot of paper?



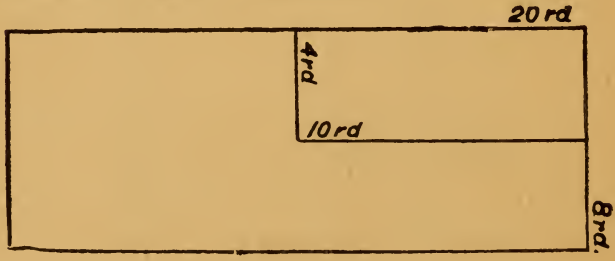

2. What is the difference between a 4-inch square of paper and a piece containing 4 square inches?



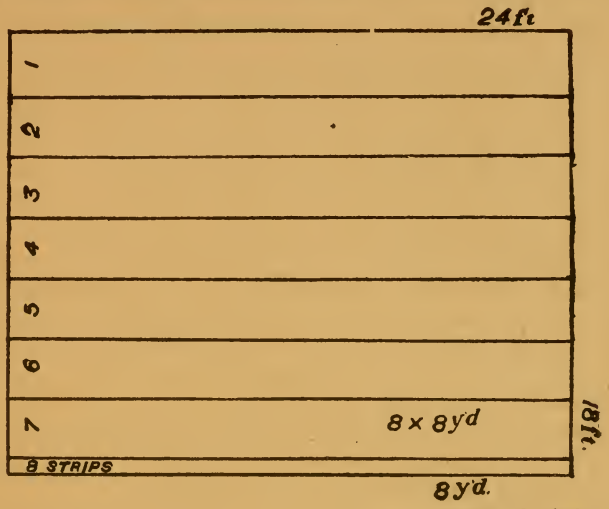
3. Compare a 6-inch square with an oblong 9 x 4 inches.




4. What part of an acre is 40 square rods?



5. **How many yards of carpeting, 30 inches wide, are required for a floor 24 x 18 feet? Carpet to run lengthwise.**




Scale ⅛ of an inch to a foot.

Suggestion:—The preceding diagrams are exceedingly simple nevertheless a clear perception of the various conditions of the problems is necessary to produce them. There is little or no chance for mechanical work. The pupil literally works out his problem. From actual practice, he perceives, for instance, that "length multiplied by width produces area." It is not a matter of memory alone. When he can intelligently and rapidly construct his diagrams, he is ready to draw his conclusions, that is, to give *you* the rule. Is this not a better way than for you to give *him* the rule at first?

## FOOD ORGANS.

1. **What is the process called by which food is converted into blood?**
   It is called digestion.
2. **How is the food moistened in the mouth?**
   By means of a juice, saliva (spittle), which is supplied by some

little sacs opening into the mouth from under the tongue and within each cheek.

3. **What is the funnel at the top of the food-pipe called?**

The pharynx.

4. **How does the food pass down the food-pipe or œsophagus?**

It is pushed along by the walls first expanding then closing behind, piece by piece, until the food reaches a little door at the bottom, opening into the upper part of the stomach.

5. **How long does the food remain in the stomach?**

Some two or three hours.

6. **What happens to it?**

It is churned about by the action of the muscles of the stomach, and mixed with a juice that comes from the lining of the stomach, called the gastric juice.

7. **Into what is the food now changed?**

Into a soft grey mass called chyme.

8. **What becomes of the fluids sent down into the stomach?**

They are absorbed by the walls.

9. **What effect has ice-water upon the stomach?**

It lowers the temperature of the stomach which in good working order should be about ninety-eight degrees. Then it must be absorbed before the food changing process or digestion can proceed further.

10. **What connects the stomach with the bowels?**

A puckered-up muscular opening called the pylorus.

11. **What work is done by this doorkeeper?**

It sends back into the stomach food not thoroughly digested, but allows the prepared food, chyme, to pass on.

12. **Where does the prepared food next pass?**

Into the bowels.

13. **What can you state about them?**

They are known as the intestines, and consist of a long tube about an inch in width and some twenty-five feet in length. This tube is coiled or folded up to fit into the lower story of the chest called the abdomen.

**14 What juices now mix with the food?**

Two, one coming from the liver, a greenish yellow juice, called bile, and another from the pancreas.

**15. Into what four classes may we divide our food?**

Into the starchy; the sugary; the fatty; and the albuminous, that is, foods containing a substance like the white of an egg.

**16. How do the different juices act on the various kinds of food?**

Saliva changes starch into a sort of sugar. Gastric juice digests sugar and albumen. Pancreatic juice will digest any kind of food, while bile acts mainly on the fats.

**17. What can you state of the inner lining of the intestines?**

It consists of a thin, soft, flexible, much ruffled membrane, covered with an infinite number of tiny mouths, which are the openings of tubes, like little hairs.

**18. What work is done by these tiny tubes?**

They suck up the food which has now become thin and milky and is known as chyle.

**19. What becomes of the chyle?**

It is passed through the various small ducts and glands where, in some mysterious way, it is exchanged into that red liquid, blood.

**20. What is the next connection?**

A pipe about the size of a goose quill which connects with a vein at the left side of the neck. This vein carries the *blood* to the heart.

## DICTATION EXERCISES.

### MORALS FROM ESOP'S FABLES.

1. The weak, as well as the strong, have their place in the world. —*From Lion and the Mouse.*

2. Do not belittle that which you have failed to reach.—*The Fox and the Grapes.*

3. Half a loaf is better than none.—*The Hawk and the Nightingale.*

4. It is well to use common sense even in our acts of kindness.—*The Hen and the Swallow.*

5. One good turn deserves another.—*The Ant and the Dove.*

6. Do unto others as ye would have them do unto you.—*The Fox and the Stork.*

7. Beware of flattery.—*The Fox and the Raven.*

8. Gentle means often succeed when force fails.—*The Wind and the Sun.*

9. In union there is strength.—*The Old Man and his Sons.*

10. Labor is its own reward.—*Ploughman and his Sons.*

11.—Greediness sometimes overreaches itself.—*The Woman and her Hen.*

12. Ill-tempered people make it unpleasant for all about them.—*The Dog in the Manger.*

13. Steady work, though slow, often wins in the end.—*The Hare and the Tortoise.*

14. Two working together may succeed where one alone would fail.—*The Blind Man and the Lame Man.*

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